

Review of Indo-Pacific specimens of the subfamily Scorpinae (Scorpinae), deposited in the Muséum national d'Histoire naturelle, Paris, with description of a new species of *Neomerinthe*

by

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ABSTRACT. - Examination of 739 Indo-Pacific specimens in the subfamily Scorpinae, deposited in the Muséum national d'Histoire naturelle, Paris, disclosed 71 species (and/or morphotypes) in 13 genera: *Iracundus* (1 species), *Neomerinthe* (9), *Neoscorpaena* (1), *Parascorpaena* (6), *Phenacoscopius* (4), *Pontinus* (3), *Pteroidichthys* (2), *Rhinopias* (3), *Scorpaena* (6), *Scorpaenodes* (9), *Scorpaenopsis* (18), *Sebastapistes* (8) and *Taenianotus* (1). *Neomerinthe naevosa* sp. nov. is described on the basis of 28 specimens from French Polynesia. The poorly known scorpionfish, *Neoscorpaena nielseni*, previously known only from South Africa, is redescribed on the basis of 11 specimens, with new records from Madagascar, the Seychelles and Réunion. *Pontinus nigerimum*, previously known only from the east coast of Africa, is recorded from Madagascar and Réunion. *Pontinus rhodochrous* (Günther, 1872) is herein regarded as a senior synonym of *Pontinus hexanema* (Günther, 1880), based on examination of the syntypes and holotype, respectively, of these nominal species. *Scorpaena bulacephala*, previously known only from the type specimens from Norfolk Island, northern Tasman Sea, is recorded from Vanuatu. *Scorpaenodes guamensis* (Quoy & Gaimard, 1824) is herein regarded as a senior synonym of *Sebastistes minutus* Cuvier, 1829 on the basis of examination of syntypes of the two nominal species. *Scorpaenopsis gilchristi*, previously known only from two South African specimens, is recorded from New Caledonia. *Scorpaenopsis pusilla*, previously known only from two type specimens, is redescribed on the basis of 46 specimens from the Marquesas Islands. *Scorpaenopsis venosa* is recorded for the first time from the Red Sea, the Seychelles, Madagascar and New Caledonia. *Sebastapistes strongia* (Cuvier, 1829) is regarded as a senior synonym of *Scorpaena laniaria* Cuvier, 1829 on the basis of the syntypes and holotype, respectively, of the nominal species. *Sebastapistes taeniophrys*, previously known only from two type specimens from the Philippines, is recorded from Madagascar, being the first record of the species from the Indian Ocean. *Scorpaena nesogallica* Cuvier, 1829 and *Scorpaena novaeguineae* Cuvier, 1829 are confirmed as junior synonyms of *Scorpaenopsis gibbosa* (Bloch & Schneider, 1801) and *Scorpaenopsis venosa* (Cuvier, 1829), respectively. An annotated list of the specimens examined is provided.

RÉSUMÉ. - Revue des spécimens indo-pacifiques de la sous-famille des Scorpinae (Scorpinae) des collections du MNHN, avec description d'une nouvelle espèce de *Neomerinthe*.

L'examen de 739 spécimens de la sous-famille Scorpinae provenant de l'Indo-Pacifique et déposés dans les collections du Muséum national d'Histoire naturelle de Paris, a permis de reconnaître 13 genres avec 71 espèces (et/ou morphotypes) : *Iracundus* (1 espèce), *Neomerinthe* (9), *Neoscorpaena* (1), *Parascorpaena* (6), *Phenacoscopius* (4), *Pontinus* (3), *Pteroidichthys* (2), *Rhinopias* (3), *Scorpaena* (6), *Scorpaenodes* (9), *Scorpaenopsis* (18), *Sebastapistes* (8) et *Taenianotus* (1). *Neomerinthe naevosa* sp. nov. est décrite sur la base de 28 spécimens de Polynésie française. La rascasse *Neoscorpaena nielseni*, connue jusque-là seulement d'Afrique du Sud, est redécrise sur la base de 11 spécimens et est signalée pour la première fois de Madagascar, des Seychelles et de La Réunion. *Pontinus nigerimum*, précédemment seulement connue de la côte Est de l'Afrique, est signalée de Madagascar et de La Réunion. *Pontinus rhodochrous* (Günther, 1872) est considérée comme un synonyme senior de *Pontinus hexanema* (Günther, 1880) après examen respectif des syntypes et de l'holotype de ces espèces nominales. *Scorpaena bulacephala*, connue seulement de l'île de Norfolk par les spécimens types, est signalée du Vanuatu. *Scorpaenodes guamensis* (Quoy & Gaimard, 1824) est considérée comme un synonyme senior de *Sebastistes minutus* Cuvier, 1829 après examen des syntypes des deux espèces nominales. *Scorpaenopsis gilchristi*, précédemment connue par seulement deux spécimens d'Afrique du Sud, est signalée de Nouvelle-Calédonie. *Scorpaenopsis pusilla*, précédemment connue par seulement ses deux spécimens types, est redécrise sur la base complémentaire de 46 nouveaux spécimens des îles Marquises. *Scorpaenopsis venosa* est signalée pour la première fois de Mer Rouge, des Seychelles, de Madagascar et de Nouvelle-Calédonie. *Sebastapistes strongia* (Cuvier, 1829) est considérée comme un synonyme senior de *Scorpaena laniaria* Cuvier, 1829 après examen respectif des syntypes et de l'holotype des espèces nominales. *Sebastapistes taeniophrys*, précédemment connue par seulement ses deux spécimens types des Philippines, est signalée de Madagascar, ce qui représente le premier signalement de cette espèce dans l'Océan Indien. *Scorpaena nesogallica* Cuvier, 1829 et *Scorpaena novaeguineae* Cuvier, 1829 sont confirmées dans leur statut de synonymes juniors de *Scorpaenopsis gibbosa* (Bloch & Schneider, 1801) et de *Scorpaenopsis venosa* (Cuvier, 1829) respectivement. Une liste annotée de l'ensemble des spécimens observés est fournie.

Key words. - Scorpinae - Scorpinae - Indo-Pacific - Taxonomy - New species - Synonymies - Redescriptions - Distribution.

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The Muséum national d'Histoire naturelle in Paris holds an enormous collection of scorpionfishes from the Indo-Pacific region, including historical specimens described by, for example, Cuvier (1829), Cuvier and Valenciennes (1829) and Sauvage (1873, 1882). The Musorstrom Surveys under the Tropical Deep-Sea Benthos Program led by the Muséum national d'Histoire naturelle (MNHN) and l'Institut de Recherche pour le Développement (IRD, formerly ORSTOM) have significantly contributed to the collections more recently. Since 1976, surveys and collections have been made in the Philippines (1976, 1980, 1985), Chesterfield Islands (1984, 1988, 2005), New Caledonia (1985, 1986, 1993, 1994, 1999, 2002, 2003, 2008), Indonesia (1991), Wallis and Futuna Islands (1992), Vanuatu (1994, 2004, 2005, 2006), Marquesas Islands (1997, 2002), Fiji (1998, 1999), Solomon Islands (2000, 2004), Tonga (2000), Taiwan (2000, 2001), French Polynesia (2002, 2009), and the Austral Islands (2002).

All available Indo-Pacific specimens of the subfamily Scorpinae registered in MNHN were examined during the present study. An annotated list of species and specimens is herein provided, along with the description of a new species of *Neomerinthe*. The synonymies and validity of the historical type specimens were assessed and redescriptions of poorly known species are given.

MATERIALS AND METHODS

Measurements follow Motomura (2004b, 2004c), with additional measurements (i.e., head width) following Motomura *et al.* (2005b, 2006a), and maxillary depth following Motomura *et al.* (2006b). Counts follow Motomura *et al.* (2005a, 2005b, 2005c) and Motomura and Johnson (2006). The last two soft rays of the dorsal and anal fins are counted as single rays, each pair being associated with a single pterygiophore. Standard length is expressed as SL. Terminology of head spines follows Randall and Eschmeyer (2002: fig. 1) and Motomura (2004c: fig. 1) with the following additions: the spine occurring at the base of the uppermost preopercular spine is referred to as the supplemental preopercular spine (Eschmeyer, 1965); the spine occurring at the lateral surface of the lacrimal bone is referred to as the lateral lacrimal spine (Motomura and Senou, 2008: fig. 2); the coronal and pretympanic (as an extra spine) spines are as figured in Chen (1981: fig. 1) and Motomura *et al.* (2004: fig. 14b) respectively.

The description of a new species is given first, followed by a list of identified species, arranged in alphabetical order. The latter includes original descriptions, examined specimen data and remarks. Specimens are identified by registration number (including number of specimens if more than one), data including standard length, general locality and citation

if listed in previous publications.

Specimens examined in this study have been deposited in the Muséum national d'Histoire naturelle, Paris (MNHN and MNHN ICOS, Ichtyologie Collection Ostéologie), and comparative material examined for this study have been deposited in the Australian Museum, Sydney (AMS); Natural History Museum, London (BMNH); California Academy of Sciences, San Francisco (CAS); Australian National Fish Collection at the Commonwealth Scientific and Industrial Research Organisation's Marine and Atmospheric Research laboratories, Hobart (CSIRO); Kagoshima University Museum, Kagoshima (KAUM); National Natuurhistorisch Museum, Leiden (RMNH); South African Institute for Aquatic Biodiversity, National Research Foundation, Grahamstown (SAIAB); Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt-am-Main (SMF); Museum Support Center, Smithsonian Institution National Museum of Natural History, Suitland (USNM); Western Australian Museum of Natural Science, Welshpool (WAM); and Zoological Survey of India, Kolkata (ZSI).

NEOMERINTHE NAEVOSA SP. NOV.

[New English name: Blotched Polynesian Scorpionfish]

[New French name: Rascasse maculée de Polynésie]

(Figs 1-2)

Holotype

MNHN 2010-0952 (ex. MNHN 2000-5237), 75.5 mm SL, Hiva Oa Island, Marquesas Islands, French Polynesia, 09°43'59"S, 138°51'00"W, 107-108 m depth, beam trawl, RV *Alis*, 30 Aug. 1997, Campagne Musorstrom 9.

Paratypes

27 specimens, 18.4-67.8 mm SL, all from Marquesas Islands, French Polynesia. AMS I. 45370-001, 65.3 mm SL, Eiao Island, 07°58'59"S, 140°43'59"W, 120 m, beam trawl, RV *Alis*, 23 Aug. 1997, Campagne Musorstrom 9; CSIRO H 7121-01, 57.2 mm SL, same data as AMS I. 45370-001; KAUM-I. 31735, 52.8 mm SL, same data as AMS I. 45370-001; MNHN 2000-4493, 63.0 mm SL, Eiao Island, 07°58'01"S, 140°43'01"W, 145 m, beam trawl, RV *Alis*, 23 Aug. 1997, Campagne Musorstrom 9; MNHN 2000-4538, 2, 57.0-67.8 mm SL, Hiva Oa Island, 09°40'59"S, 139°03'00"W, 95-305 m depth, beam trawl, RV *Alis*, 31 Aug. 1997, Campagne Musorstrom 9; MNHN 2000-4548, 5, 27.3-43.5 mm SL, Nuku Hiva Island, 08°45'00"S, 140°13'59"W, 108-112 m, beam trawl, RV *Alis*, 25 Aug. 1997, Campagne Musorstrom 9; MNHN 2000-5187, 2, 22.6-30.1 mm SL, same data as AMS I. 45370-001; MNHN 2000-5237, 2, 39.7-51.6 mm SL, collected with holotype; MNHN 2000-5550, 6, 26.2-57.1 mm SL, Fatu Hiva Island, 10°28'01"S, 138°40'59"W, 119-122 m, warén dredge, RV *Alis*, 1 Sept. 1997, Campagne Musorstrom 9; MNHN 2003-0948, 31.2 mm SL, Eiao Island, 07°58'59"S, 140°43'01"W, 80 m, beam trawl, RV *Alis*, 23

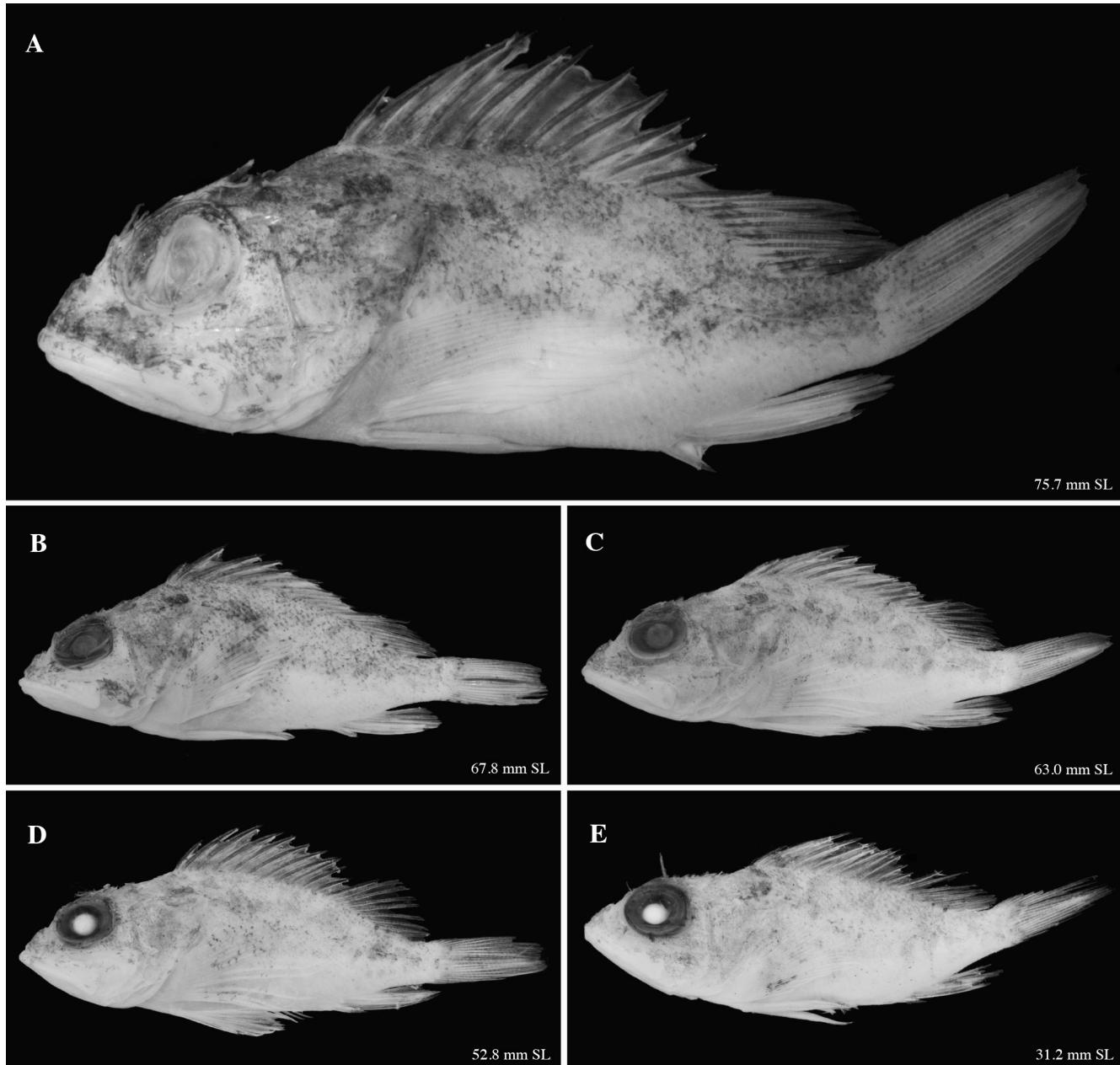


Figure 1. - *Neomerinthe naevosa* sp. nov. **A:** Holotype, MNHN 2010-0952, 75.5 mm SL; **B:** Paratype, MNHN 2000-4538, 67.8 mm SL; **C:** Paratype, MNHN 2000-4493, 63.0 mm SL; **D:** Paratype, KAUM-I. 31735, 52.8 mm SL; **E:** Paratype, MNHN 2003-0948, 31.2 mm SL.

Aug. 1997, Campagne Musorstrom 9; MNHN 2010-0932, 24.0 mm SL, Eiao Island, 07°58'59"S, 140°43'59"W, 120 m, beam trawl, RV *Alis*, 23 Aug. 1997, Campagne Musorstrom 9; MNHN 2010-0936, 54.0 mm SL, same data as MNHN 2000-4538; MNHN 2010-0937, 23.1 mm SL, same data as MNHN 2000-4538; MNHN 2010-0938, larva, 18.4 mm SL, same data as MNHN 2000-4538; USNM 398708, 45.0 mm SL, same data as AMS I. 45370-001.

Diagnosis

A species of *Neomerinthe* with the following characters:

9 (rarely 10) dorsal-fin soft rays; 18 (rarely 17 or 19) pectoral-fin rays; 47-53 scale rows in longitudinal series; 24 pored lateral-line scales; 7-9 scale rows above lateral line, 13-15 below; 6-8 scale rows between sixth dorsal-fin spine base and lateral line; 7 or 8 scale rows between last dorsal-fin spine base and lateral line; 19-21 gill rakers in adults, 15-19 in young; median ridge on lateral surface of maxilla absent; lateral lacrimal spine absent; anterior and posterior lacrimal spines simple, directed posteroventrally; 3 suborbital spines; 5 preopercular spines; upper posttemporal spine absent; pos-

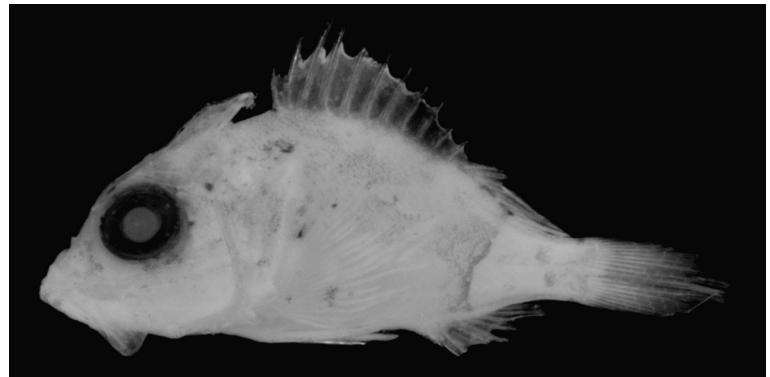


Figure 2. - Larva of *Neomerinthe naevosa* sp. nov.
MNHN 2010-0938, 18.4 mm SL.

terior margin of maxilla extending beyond posterior margin of pupil; a slit behind fourth gill arch present; swimbladder absent; a relatively small eye, orbit diameter 14.5-15.4% SL; a relatively narrow interorbital space, interorbital width at middle of eye 5.4-6.3% SL, at preocular spine base 4.7-5.6% SL; black blotch above first and second pored lateral-line scales.

Description

Data for the holotype are presented first, followed by paratype data (if different) in parentheses. Dorsal-fin rays XII, 9 (10 in a paratype); anal-fin rays III, 5; pectoral-fin rays 18 on each side of body (asymmetrically 17 and 18 in a paratype, 19 on each side in a paratype); pelvic-fin rays I, 5; scale rows in longitudinal series 52 (47-53, mode 52); pored lateral-line scales 24; scale rows above lateral line 9 (7-9, mode 8), below 14 (13-15, mode 14); scale rows between sixth dorsal-fin spine base and lateral line 7 (6-8, mode 7); scale rows between last dorsal-fin spine base and lateral line 7 (7 or 8, mode 7); predorsal scale rows 8 (7-9, mode 8); gill rakers on upper limb 6 (6 or 7, mode 7), on lower limb 14 (12-15, mode 13, in over ca. 40 mm SL; 8-12 in less than ca. 40 mm SL), total 20 (19-21 in adults, 15-19 in young); caudal-fin segmented rays 14 (14-17, mode 16).

Measurements, expressed as percentage of SL, based on specimens over 39 mm SL: Body depth 35.5% SL (32.2-37.6% SL, mean 35.4% SL); body width 20.5 (19.4-22.9, 21.1); head length 48.1 (46.7-49.8, 48.2); snout length 13.2 (11.7-13.5, 12.7); orbit diameter 14.9 (14.5-15.4, 15.1); interorbital width at middle of eye 5.4 (5.4-6.3, 5.7); interorbital width between preocular spine bases 4.9 (4.7-5.6, 5.1); head width 16.0 (15.1-15.9, 15.7); upper-jaw length 23.8 (22.7-23.9, 23.3); maxillary depth 7.0 (6.3-7.0, 6.9); postorbital length 22.1 (21.7-22.7, 22.3); pre-dorsal-fin length 41.7 (39.9-44.3, 42.4); pre-anal-fin length 74.9 (73.6-77.7, 75.4); pre-pelvic-fin length 39.6 (39.0-41.3, 40.1); first dorsal-fin spine length 9.4 (7.6-10.3, 9.5); second dorsal-fin spine length 16.9 (16.1-20.4, 17.9); third dorsal-fin spine length 22.3 (19.8-22.4, 21.1); fourth dorsal-fin spine length 20.2 (19.6-20.7, 20.1); fifth dorsal-fin spine length 18.9 (18.0-

20.5, 19.2); eleventh dorsal-fin spine length 11.8 (9.6-11.8, 10.5); twelfth dorsal-fin spine length 14.5 (13.3-14.8, 14.1); longest dorsal-fin soft ray 21.9 (18.1-19.7, 19.4); first anal-fin spine length 6.9 (6.7-9.1, 7.8); second anal-fin spine length 23.0 (22.2-24.8, 23.3); third anal-fin spine length 18.8 (17.8-19.7, 18.7); longest anal-fin soft ray length 23.0 (20.2-23.0, 21.7); longest pectoral-fin ray length 31.6 (29.5-35.0, 32.6); pelvic-fin spine length 17.3 (16.4-18.9, 17.9); longest pelvic-fin soft ray length 28.7 (26.0-29.7, 28.3); caudal-fin length 29.1 (26.7-30.1, 28.4); caudal-peduncle length 16.5 (14.0-16.7, 15.4); caudal-peduncle depth 10.1 (9.8-10.6, 10.2).

Third dorsal-fin spine longest; length of twelfth spine 1.2 (1.3-1.4, mean 1.3) in last spine; membrane of spinous portion of dorsal fin moderately notched; all soft rays of dorsal fin branched; second soft ray longest (first ray in some paratypes), its length shorter than that of longest dorsal-fin spine; posterior branch of last soft ray joined by membrane to caudal peduncle for half of its length (half to two-thirds). First anal-fin spine 3.3 (2.7-3.4, mean 3.0) in second spine, 2.7 (2.1-2.7, 2.4) in third spine; all soft rays branched; first soft ray longest (second ray in some paratypes); posterior branch of last soft ray not joined by membrane to caudal peduncle. Upper 2 and lower 9 rays of pectoral fin unbranched, remaining 7 rays branched (1 middle ray branched in 65.3 mm paratype; 7 middle rays branched in 57.2 mm paratype; all rays in remaining paratypes unbranched); eleventh ray longest, its length less than head length; all rays not thickened; pectoral fin not bilobed. All pelvic-fin soft rays branched; second soft ray longest, its length longer than upper-jaw length; last soft ray joined by membrane to abdomen for one-third of its length. Caudal-peduncle depth 1.6 (1.4-1.6, mean 1.5) in caudal-peduncle length.

Body moderately compressed anteriorly, progressively more compressed posteriorly. Nape and anterior body moderately arched. Body depth relatively shallow, less than head length. Supraocular tentacle slightly greater than pupil diameter, its tip reaching to nuchal spine when laid back (tentacle always present, its length variable from minute to longer than orbit diameter, longest tentacle in paratypes reaching

to second dorsal-fin spine base when laid back). Posterior lacrimal spine associated with a short, fleshy tentacle; posterior lacrimal spine tentacle linked posteriorly to head by skin. A short, branched tentacle on posterior edge of low membranous tube associated with anterior nostril; the tentacle extending beyond (or just reaching) posterior margin of posterior nostril when laid back. Pectoral-fin axil without skin flaps.

Well-exposed ctenoid scales covering surface of body; body scales not extending onto rays or membranes of fins, except bases of pectoral and caudal fins. Cycloid scales covering pectoral-fin base and anteroventral body. Exposed ctenoid scales on cheek, behind orbit, opercle, and occiput. Lateral line complete, extending onto base of caudal fin; lateral line sloping slightly downward above posterior tip of opercle. Underside of dentary with three well-developed sensory pores on each side, first pore below origin of anterior lacrimal spine, second pore below posterior lacrimal spine, third pore located on posterior margin of dentary. A pair of small pores behind symphysial knob of lower jaw in ventral view. Gill rakers relatively long with spinous tips, length of longest raker on first gill arch longer than that of gill filaments around angle of gill arch; a slit behind fourth gill arch. Swimbladder absent.

Mouth large, oblique, forming an angle of about 20 degrees to horizontal axis of head and body. Posterior margin of maxilla just short of a vertical through posterior margin of orbit. No distinct longitudinal median ridge on lateral surface of maxilla. Lower jaw with an indistinct symphysial knob. Width of symphysial gap separating premaxillary teeth bands subequal to width of each band. Villiform teeth on upper and lower jaw; tooth band narrowing posteriorly. Tooth band of upper jaw slightly wider than that of lower jaw. Villiform teeth on vomer and palatines; width of vomer equal to about half of palatine length. Underside of lower jaw without ridges.

Dorsal profile of snout steep, forming an angle of about 50 degrees to horizontal axis of head and body. Nasal spine simple, directed dorsally, its tip extending well beyond top of ascending process of premaxilla in lateral view. Ascending process of premaxilla not intruding into interorbital space. Median interorbital ridge absent. Interorbital ridges poorly developed, separated by a relatively shallow channel, beginning posterior to nasal spines and ending near tympanic spines; ridges not conjoined to each other. Interorbital space relatively shallow, about one-tenth of orbit extending above dorsal profile of head. Preocular spine simple, directed dorsally; tip of spine extending slightly above level of upper margin of pupil in lateral view; flattened anteriorly and posteriorly; anterior surface of spine without distinct ridges. Supraocular spine simple, not canted laterally; its length subequal to that of postocular spines. Postocular spine simple, not canted laterally. Tympanic spine simple, not canted

laterally; located behind postocular spine; posterior end of tympanic spine base anterior to origin of parietal spine base in dorsal view. Interorbital, coronal, and pretympanic spines absent. Occipital pit absent, occipital region nearly flat, without distinct transverse ridges in front or rear of occiput. Occiput surrounded laterally only by bases of tympanic and parietal spines. Parietal spine simple. Nuchal spine simple; nuchal and parietal spines joined at base. Postorbital without spines. Sphenotic with 5 small spines (1-7 spines). An indistinct ridge between tympanic and sphenotic spines. Pterotic spine simple; length of spine base subequal to that of parietal spine base. Upper posttemporal spine absent. Lower posttemporal spine simple, its base length slightly less than that of pterotic spine base. Supracleithral spine simple. Cleithral spine flattened, pointed, with an indistinct low median ridge.

Lateral lacrimal spine absent (a spine present in a paratype). Anterior tip of anteriorly directed lacrimal ridge embedded. Anterior lacrimal spine simple, directed posteroventrally, its tip just reaching dorsal margin of upper lip. Posterior lacrimal spine simple, directed posteroventrally; posterior lacrimal spines greater than anterior lacrimal spine. Suborbital ridge with three spines; first spine below posterior margin of pupil; second spine below posterior margin of orbit; third spine behind orbit at end of ridge. Space between ventral margin of eye and suborbital ridge remarkably narrow. Suborbital pit absent. Preopercle with five spines; uppermost spine largest, with a supplemental preopercular spine on its base; second spine moderately developed. Preopercle, between uppermost preopercular spine and upper end of preopercle, without serrae or spines. Upper opercular spine simple without distinct median ridge. Lower opercular spine simple with a distinct median ridge. Space between upper and lower opercular spines without ridges. Posterior tips of upper and lower opercular spines not reaching opercular margin.

Origin of first dorsal-fin spine above supracleithral spine. Posterior tip of pectoral fin not reaching to a vertical through origin of anal fin. Origin of pelvic-fin spine just below origin of first pectoral-fin ray. Posterior tip of depressed pelvic fin extending beyond anus (or just reaching anus). Origin of first anal-fin spine below posterior to last dorsal-fin spine.

Colour of preserved specimens. Head and body strongly mottled dorsally, whitish ventrally. Inside mouth white. An elongate black blotch above first and second pored lateral-line scales. Spinous portion of dorsal fin with poorly defined black blotches (some specimens with distinct blotch between seventh and eleventh spines); soft-rayed portion of dorsal fin whitish with a greyish band basally and a poorly defined blotch at posterior tip of fin (band and blotch absent in some specimens). Pectoral, anal and caudal fins with scattered melanophores. Pectoral-fin axil without black markings. Pelvic fin whitish. In juveniles, a short, narrow saddle at front of

first dorsal-fin spine and a blotch or band on anterior spinous portion of dorsal fin (Fig. 1E).

Description of larva. Based on a larval specimen (MNHN 2010-0938, 18.4 mm SL; Fig. 2): Head large, head length 53.8% of SL. Body deep, body depth 41.9% of SL. Mouth small; posterior margin of maxilla not reaching to posterior margin of pupil. Most head spine structures same as those of adults, except for remarkably developed parietal spine, its length subequal to orbit diameter; minute nuchal spine behind parietal spine. Black blotch above first and second pored lateral-line scales. A short, narrow band at front of first dorsal-fin spine base. Black blotch between seventh and eleventh spines of dorsal fin.

Distribution

Currently known only from the Marquesas Islands, French Polynesia.

Etymology

The specific name *naevosa* is derived from Latin meaning “blotch,” in reference to a large black blotch above the first and second pored lateral-line scales.

Remarks

A comprehensive taxonomic study of Indo-Pacific *Neomerinthe* has at no time been carried out, although 12 nominal species are currently recognized (Motomura, unpub.data): *Neomerinthe bucephalus* (Alcock, 1896) (type locality: India), *Neomerinthe erostris* (Alcock, 1896) (Sri Lanka), *Neomerinthe rufescens* (Gilbert, 1905) (Hawaii), *Neomerinthe amplisquamiceps* (Fowler, 1938) (Philippines), *Neomerinthe megalepis* (Fowler, 1938) (Hong Kong), *Neomerinthe gibbifrons* (Fowler, 1938) (Philippines), *Neomerinthe pallidimacula* (Fowler, 1938) (Philippines), *Neomerinthe kaufmani* (Herre, 1952) (Philippines), *Neomerinthe rotunda* Chen, 1981 (Taiwan), *Neomerinthe procura* Chen, 1981 (Taiwan), *Neomerinthe bauchotae* Poss & Duhamel, 1991 (southern Indian Ocean) and *Neomerinthe bathyperimensis* Zajonz & Klausewitz, 2002 (Red Sea). Examination of all available type specimens of these nominal species by the first author showed that seven (*N. erostris*, *N. rufescens*, *N. gibbifrons*, *N. pallidimacula*, *N. rotunda*, *N. bauchotae*, and *N. bathyperimensis*) shared the absence of the lateral lacrimal spine with the new species, *N. naevosa*. Of the former seven species, *N. erostris*, *N. gibbifrons*, *N. rotunda*, and *N. bathyperimensis* were characterized by a distinct median ridge on the lateral surface of the maxilla and a dorsally-rounded head profile (vs median ridge absent and head profile pointed in *N. naevosa*). It is likely that *N. erostris* will prove to be a senior synonym of *N. gibbifrons*, *N. rotunda*, and *N. bathyperimensis*. *Neomerinthe naevosa* is distinguished from *N. pallidimacula* and *N. bauchotae* by having a slit behind the fourth gill arch (vs slit absent in

N. bauchotae), usually 18 pectoral-fin rays (vs 16 in *N. bauchotae* and 20 in *N. pallidimacula*) and usually 9 dorsal-fin soft rays (vs 10 in *N. bauchotae*). *Neomerinthe naevosa* is similar to *N. rufescens* in head spine structures and meristics, but differs in having the posterior margin of the maxilla extending beyond the posterior margin of the pupil (vs just reaching in the latter), a relatively small eye (orbit diameter 14.5–15.4% SL vs 16.4–16.5%), a relatively narrow interorbital space (interorbital width at middle of eye 5.4–6.3% SL vs 5.1%; interorbital width at preocular spine base 4.7–5.6% SL vs 4.4–4.6%), and a distinct black blotch present above the first and second pored lateral-line scales throughout life (vs usually absent, rarely an indistinct blotch).

ANNOTATED LIST OF SPECIMENS OF SCORPAENINAE IN MNHN

Iracundus signifer Jordan & Evermann, 1903

Iracundus signifer Jordan & Evermann, 1903: 210 (type locality: Honolulu, Oahu, Hawaiian Islands).

Material examined. - MNHN 1975-1021, 2, 51.1–58.9 mm SL, Hawaiian Islands; MNHN 1975-1022, 3, 73.9–73.9 mm SL, Hawaiian Islands; MNHN 2005-2626, 48.9 mm SL, New Caledonia.

Neomerinthe bauchotae Poss & Duhamel, 1991

Neomerinthe bauchotae Poss & Duhamel, 1991: 94, figs 1–2 (type locality: Saint Paul Island, southern Indian Ocean, 38°48'S, 77°34'E).

Material examined. - MNHN 1989-0273, holotype, 74.0 mm SL, Saint Paul Island (Poss and Duhamel, 1991); MNHN 1989-0274, paratype, 48.4 mm SL, Amsterdam Island (Poss and Duhamel, 1991); MNHN 1989-0275, paratype, 57.4 mm SL, Saint Paul Island (Poss and Duhamel, 1991); MNHN 1989-0276, 3 paratypes, 61.7–70.3 mm SL, Saint Paul Island (Poss and Duhamel, 1991); MNHN 1989-0277, 4 paratypes (1 of 4 cleared and stained), 45.3–71.0 mm SL, Amsterdam Island (Poss and Duhamel, 1991); MNHN 1989-0278, paratype, 54.8 mm SL, Saint Paul Island (Poss and Duhamel, 1991); MNHN 1989-0279, 3 paratypes, 27.7–53.2 mm SL, Amsterdam Island (Poss and Duhamel, 1991); MNHN 1990-1500, paratype, 76.4 mm SL, Saint Paul Island (Poss and Duhamel, 1991).

Remarks. - Poss and Duhamel (1991) mistakenly gave the locality of the holotype of *N. bauchotae* as Amsterdam Island. However, the holotype data clearly state Saint Paul Island, which should now be recognized as the type locality of the species.

Neomerinthe kaufmani (Herre, 1952)

Scorpaena kaufmani Herre, 1952: 397 (type locality: Manila Bay, Luzon, Philippines).

Material examined. - MNHN 2002-2969, 101.9 mm SL, Philippines; MNHN 2006-0328, 3, 36.7–42.9 mm SL, Solomon Islands.

Remarks. - These specimens were characterized by lacking a second preopercular spine and a distinct longitudinal median ridge on the maxilla surface, and having an elongate body, lateral lacrimal spine, the anterior lacrimal spine directed anteroventrally or ventrally, an upper posttemporal spine, 19 pectoral-fin rays, 16 gill rakers, and the pectoral-fin margin rounded. Because these characters agreed with the holotype of *Scorpaena kaufmani* (USNM 202511, 85.2 mm SL), the specimens were tentatively identified as that species.

Neomerinthe megalepis (Fowler, 1938)

Scorpaena megalepis Fowler, 1938: 56, fig. 22 (type locality: vicinity of Hong Kong, 21°54'N, 114°46'E).

Material examined. - MNHN 1978-0685, 94.2 mm SL, New Caledonia; MNHN 2000-1470, 4, 22.8-68.3 mm SL, New Caledonia; MNHN 2000-5204, 9, 35.2-70.7 mm SL, New Caledonia; MNHN 2002-1334, 77.6 mm SL, New Caledonia; MNHN 2002-1675, 2, 45.7-53.9 mm SL, New Caledonia; MNHN 2002-3235, 2, 29.3-59.9 mm SL, New Caledonia; MNHN 2003-1916, 2, 58.1-65.5 mm SL, New Caledonia; MNHN 2005-2591, 58.9 mm SL, New Caledonia; MNHN 2005-2595, 90.7 mm SL, New Caledonia; MNHN 2005-2596, 64.2 mm SL, New Caledonia; MNHN 2005-2602, 2, 47.1-77.0 mm SL, New Caledonia; MNHN 2005-2625, 59.3 mm SL, New Caledonia; MNHN 2005-2654, 2, 93.8-109.9 mm SL, New Caledonia; MNHN 2010-0467 (ex. MNHN 2005-2650), 77.6 mm SL, New Caledonia; MNHN 2010-0528 (ex. MNHN 2003-1563), 2, 68.3-86.0 mm SL, New Caledonia; MNHN 2010-0934 (ex. MNHN 2001-2850), 27.8 mm SL, Wallis and Futuna Islands.

Remarks. - These specimens were characterized by lacking a distinct median ridge on the maxilla surface, and having a lateral lacrimal spine, the anterior lacrimal spine directed posteroventrally, a small second preopercular spine, a small upper posttemporal spine, 17-19 (mode 18) pectoral-fin rays, 36-38 (37) scale rows in the longitudinal series, 23-25 (24) pored lateral-line scales, 6-8 (6) scale rows above the lateral line, 12-14 (12) scale rows below the lateral line, 5 or 6 (5) scale rows between the last dorsal-fin spine base and lateral

line, 5 or 6 (6) scale rows between the sixth dorsal-fin spine base and lateral line, 6-8 (7) predorsal scales, 18-21 (18) gill rakers, the pectoral-fin margin rounded, some pectoral-fin rays branched in specimens over ca. 45 mm SL, the length of the supraocular tentacles variable but always less than the orbit diameter, a blackish blotch on the spinous portion of the dorsal fin in specimens less than ca. 45 mm SL, and the fins and body usually whitish in preserved specimens (some specimens with poorly defined blackish blotches on the dorsal body). Most of these characters agreed with those of the holotype of *Scorpaena megalepis* (USNM 98897, 74.7 mm SL). Of the 29 specimens examined, 28 were collected off New Caledonia in depths of 215-505 m. The remaining specimen was collected in 245-400 m off the Wallis and Futuna Islands.

Neomerinthe naevosa Motomura, Béarez & Causse

Remarks. - This species was described above as a new species.

Neomerinthe rotunda Chen, 1981

Neomerinthe rotunda Chen, 1981: 53, figs 22, 47 (type locality: off Kaohsiung, Taiwan).

Material examined. - MNHN 1988-1528, 77.6 mm SL, Madagascar; MNHN 1991-0752, 2, 63.1-69.0 mm SL, Réunion; MNHN 1998-0058, 15, 31.1-63.0 mm SL, Vanuatu; MNHN 1998-0078, 22, 32.6-63.6 mm SL, Vanuatu; MNHN 1998-0079, 44.8 mm SL, Vanuatu; MNHN 1998-0206, 70.4 mm SL, Vanuatu; MNHN 1998-0212, 54.8 mm SL, Vanuatu; MNHN 1998-0217, 10, 36.7-60.2 mm SL, Vanuatu; MNHN 2004-0051, 33.5 mm SL, Madagascar; MNHN 2004-0056, 2, 96.0-114.7 mm SL, Madagascar; MNHN 2006-0107, 56.7 mm SL, Solomon Islands; MNHN 2008-1274, 43.4 mm SL, Vanuatu; MNHN 2008-1275, 38.9 mm SL, Vanuatu; MNHN 2008-1277, 54.0 mm SL, Vanuatu; MNHN 2008-1434, 2, 20.3-21.3 mm SL, Vanuatu; MNHN 2008-1481, 40.5 mm SL, Vanuatu; MNHN 2008-1526, 2, 31.5-36.9 mm SL, Vanuatu; MNHN 2008-1629, 2, 28.5-51.2 mm SL, Vanuatu; MNHN 2008-1660, 2, 32.7-32.8 mm SL, Vanuatu; MNHN 2010-0948 (ex. MNHN 1995-0736), 3, 38.4-44.0 mm SL, Wallis and Futuna Islands.



Figure 3. - *Neoscorpaena nielseni*. MNHN 2010-0045, 205.2 mm SL, Réunion (photo by P. Béarez).

Remarks. - *Neomerinthe rotunda* is most likely a junior synonym of *Neomerinthe erostris* (Alcock, 1896) [2 syntypes of *Scorpaena erostris* (ZSIF12977, 59.6 mm SL, ZSIF 12978, 46.9 mm SL, southern Sri Lanka), and holotype (CAS 42139, 88.4 mm SL, Taiwan) and 2 paratypes (CAS 42140, 61.7 mm SL; CAS 42155, 82.2 mm SL) of *N. rotunda* were examined]. Additional specimens representing a wider distributional range should clarify this.

Neomerinthe cf. rotunda Chen, 1981

Neomerinthe rotunda Chen, 1981: 53, figs 22, 47 (type locality: off Kaohsiung, Taiwan).

Material examined. - MNHN 2003-2444, 5, 24.9-39.9 mm SL, Philippines; MNHN 2004-1627, 47.3 mm SL, Philippines; MNHN 2005-1357, 3, 34.1-45.2 mm SL, Philippines; MNHN 2005-1905, 39.4 mm SL, Philippines.

Remarks. - This species is similar to *Neomerinthe rotunda* in lacking the lateral lacrimal spine, and having a rounded head profile dorsally and a distinct longitudinal median ridge on the maxilla surface. However, it differs from *N. rotunda* in having 19 pectoral-fin rays on each side of the body (18 in the latter) and the body of preserved specimens uniformly pale (vs fins and body mottled).

Neomerinthe rufescens (Gilbert, 1905)

Helicolenus rufescens Gilbert, 1905: 631, fig. 246 (type locality: vicinity of Kauai Island, Hawaiian Islands).

Material examined. - MNHN 1975-1007, 2, 56.6-67.1 mm SL, Hawaiian Islands.

Neomerinthe sp. 1

Material examined. - MNHN 1998-0024, 97.4 mm SL, Vanuatu; MNHN 1998-0216, 3, 110.1-123.4 mm SL, Vanuatu.

Remarks. - *Neomerinthe* sp. 1 is characterized by lacking a distinct longitudinal median ridge on the maxilla surface and second preopercular spine, and having a lateral lacrimal spine, an upper posttemporal spine, 19 pectoral-fin rays, 47-48 scale rows in the longitudinal series, 24 pored lateral-line scales, 6-7 scale rows above the lateral line, 12 scale rows below the lateral line, 6 scale rows between the last dorsal-fin spine base and lateral line, 6 scale rows between the sixth dorsal-fin spine base and lateral line, 8-9 predorsal scales, 16-20 gill rakers, the pectoral-fin margin rounded, the posterior margins of the soft-rayed portions of the dorsal and anal fins and caudal fin black, a slender body (body depth 30.8-32.8% SL) and a long caudal fin (caudal-fin length 28.6-29.8% SL). The specimens were collected in depths of 191-300 m off Vanuatu.

Neomerinthe sp. 2

Material examined. - MNHN 2001-2850, 70.2 mm SL, Wallis and Futuna Islands.

Remarks. - *Neomerinthe* sp. 2 is characterized by lacking a lateral lacrimal spine, second preopercular spine and a distinct median ridge on the maxilla surface, and having a well developed knob at the front of the lower jaw, a well developed upper posttemporal spine, 18 pectoral-fin rays, 45 scale rows in the longitudinal series, 23 pored lateral-line scales, 6 scale rows above the lateral line, 12 scale rows below the lateral line, 5 scale rows between the last dorsal-fin spine base and lateral line, 5 scale rows between the sixth dorsal-fin spine base and lateral line, 7 predorsal scales, 20 gill rakers, the pectoral-fin margin bilobed, and the fins and body pale. The unique specimen was collected at a depth of 245-400 m.

Neoscorpaena nielseni (Smith, 1964) (Fig. 3)

Sebastapistes nielseni Smith, 1964: 298, pl. 30 (fig. C) (type locality: off Durban, South Africa, 29°56'S, 31°19'E).

Material examined. - MNHN 1982-0053, 159.5 mm SL, Seychelles; MNHN 2003-0291, 216.1 mm SL, Réunion; MNHN 2004-0048, 5, 65.7-107.8 mm SL, Madagascar; MNHN 2004-0055, 135.8 mm SL, Madagascar; MNHN 2010-0045, 205.2 mm SL, Réunion.

Remarks. - In his checklist of the fishes of Western Australia, Hutchins (2001) listed *Neoscorpaena nielseni* (as *Neomerinthe nielseni*) on the basis of a single specimen (S. Morrison, pers. comm.). However, that specimen (WAM P. 31801-001, 124 mm SL) has since been identified as a species of *Phenacoscorpius* (Motomura, unpubl. data), thereby limiting the distribution of the species to South Africa. The present specimens from Madagascar, the Seychelles and Réunion represent the first non-South African records of *N. nielseni*.

The taxonomic characters of *N. nielseni* are poorly understood, the only publication giving a diagnosis of the species since its original description being Eschmeyer (1986), who included meristics ["D XII, 9-10; A III, 5; P 18-19; LSS about 30-35"], coloration ["dark spot on rear of spinous D; dusky smudges on body; probably mostly red in life"], size ["attains 14 cm (total length)"] and capture depth ["100-405 m"]. *Neoscorpaena nielseni* is redescribed here on the basis of 12 specimens [9 specimens listed above and 3 specimens from South Africa (SAIAB 35558, 3, 101.3-104.2 mm SL)]: Dorsal-fin rays XII, 9-11 (usually 10); anal-fin rays III, 5; pelvic-fin rays I, 5; pectoral-fin rays 18 on each side of body (asymmetrically 17 and 18 in one specimen); scale rows in longitudinal series 32-37; pored lateral-line scales 23-25 (usually 25); scale rows above lateral line 4-5 (usually 5); scale rows below lateral line 10; scale rows between last dorsal-fin spine base and lateral line 4-5 (usually 5); scale rows between sixth dorsal-fin spine base and lateral line 6; predorsal scales 6-8; gill rakers on upper limb 5-7, lower limb 12-13, total 17-20 (usually 18); vertebrae 26 (based on MNHN 2003-291); head length 45.9-48.6% of SL; orbit diameter 12.0-17.1% of SL (value significantly decreasing

with growth); interorbital width at middle of eye 4.4–5.8% of SL; lateral lacrimal spine absent; anterior lacrimal spine rounded, not spinous shape; posterior lacrimal spine triangular; 4–8 suborbital spines; 5 preopercular spines, with an additional spine on uppermost spine; preocular, supraocular, postocular, and tympanic spines well developed; interorbital ridges joined posteriorly to tympanic spine bases; parietal spine absent; nuchal spine large, well developed, originating from posterior end of tympanic spine; interorbital, coronal and pretympanic spines absent; occiput nearly flat, without pit; 2–13 sphenotic spines; parietal, lower posttemporal and supracleithral spines well developed; upper posttemporal spine absent, but a small spine occurring between nuchal and lower posttemporal spines; posterior margin of maxilla just short of or reaching a vertical through posterior margin of orbit; teeth on vormer and palatines; pectoral fin bilobed; usually a large black blotch on dorsal fin basally between fifth-seventh and tenth spines (lacking the blotch in some specimens); body strongly mottled, especially dorsally.

Eschmeyer (1986) reported that the species attained 14 cm total length (about 10 cm SL). Three specimens (MNHN 1982-0053, 159.5 mm SL; MNHN 2003-0291, 216.1 mm SL; MNHN 2010-0045, 205.2 mm SL) of the 12 examined in this study were significantly larger, these also differing slightly from the latter (65.7–135.8 mm SL) in having a higher count of scale rows in the longitudinal series (35–37 vs 33–35) and a longer snout (snout length 12.5–13.1% SL vs 10.7–11.6% SL). We concluded that these differences were due to individual and ontogenetic variation, respectively, although further larger specimens are necessary to confirm this.

Because fresh coloration of the species has not been reported, other than Eschmeyer's (1986) speculative "probably mostly red in life", a colour photograph of a fresh specimen (MNHN 2010-0045) is included here (Fig. 3), showing irregular yellowish blotches scattered dorsally on the head and body, and on the dorsal-fin membranes and upper half of the caudal fin (Fig. 3). The colour pattern of a reddish body with yellowish blotches is probably unique within the Indo-Pacific Scorpaeninae.

Although the species has previously been recorded from 100–405 m, the present specimens were collected in depths from 40–507 m (MNHN 1982-0053, 40–50 m; MNHN 2003-0291, 507 m; MNHN 2004-0055, 350–360 m).

Parascorpaena aurita (Rüppell, 1838)

Scorpaena aurita Rüppell, 1838: 106, pl. 27, fig. 2 (type locality: Massawa, Eritrea, Red Sea).

Material examined. - MNHN A. 1941, 113.2 mm SL, Vietnam; MNHN 6661, 94.1 mm SL, Red Sea; MNHN 6700, 2, 62.9–72.5 mm SL, Indonesia; MNHN 9156, 103.1 mm SL, Western Australia; MNHN 1987-0128, 112.9 mm SL, Vietnam; MNHN 1992-0293, 63.2 mm SL, Madagascar; MNHN 1992-0575, 104.7 mm SL,

Madagascar; MNHN 2010-0526 (ex. MNHN 1992-0666), 2, 84.2–101.5 mm SL, Madagascar.

Parascorpaena mcadamsi (Fowler, 1938)

Scorpaena mcdamasi Fowler, 1938: 60, fig. 24 (type locality: off Jolo, Philippines, 6°03'45"N, 120°57'00"E).

Material examined. - MNHN 2008-1069, 35.5 mm SL, Society Islands; MNHN 2010-0949 (ex. MNHN 1992-0294), 44.4 mm SL, Madagascar.

Parascorpaena moultoni (Whitley, 1961)

Scorpaena moultoni Whitley, 1961: 9, fig. 1 (type locality: north of Wilson Island, Capricorn Group, Queensland, Australia).

Material examined. - MNHN 1978-0526, 39.4 mm SL, locality known only as Australia; MNHN 1980-0602, 43.7 mm SL, New Caledonia; MNHN 2005-2601, 43.6 mm SL, New Caledonia; MNHN 2010-531 (ex. MNHN 2005-2628), 50.0 mm SL, New Caledonia.

Remarks. - *Scorpaena moultoni* Whitley, 1961 has been regarded as a junior synonym of *Scorpaena mcdamasi* Fowler, 1938 (Allen et al., 2006). However, the former is confirmed as a valid species characterized by having two suborbital spines (vs three spines in *mcdamasi*) (H. Motomura, unpubl. data).

Parascorpaena mossambica (Peters, 1855)

Scorpaena mossambica Peters, 1855: 434 (type locality: Ibo, Mozambique).

Material examined. - MNHN A. 2209, 99.2 mm SL, New Caledonia; MNHN B. 1453, syntype of *Scorpaena armata*, 91.8 mm SL, East Indies [Sauvage (1873), as *Scorpaena armata*]; MNHN 4762, syntype of *Scorpaena armata*, 92.4 mm SL, East Indies [Sauvage (1873), as *Scorpaena armata*]; MNHN 9885, 3, 79.4–85.5 mm SL, Fiji; MNHN 9886, 2, 63.5–70.7 mm SL, Fiji; MNHN 9887, 59.6 mm SL, Fiji; MNHN 1965-0450, 6, 49.4–83.4 mm SL, Madagascar; MNHN 1988-0453, 72.0 mm SL, Réunion; MNHN 1992-0666, 2, 84.7–84.9 mm SL, Madagascar; MNHN 1992-1018, 2, 81.6–81.9 mm SL, Madagascar.

Remarks. - Specimens from the Pacific Ocean, currently regarded as *P. mossambica*, are most likely to be *P. armata* (H. Motomura, unpubl. data). The name, *P. mossambica*, remains valid for specimens from the Indian Ocean.

Parascorpaena picta (Cuvier, 1829)

Scorpaena picta Cuvier in Cuvier & Valenciennes, 1829: 321 (type locality: Java, Indonesia).

Material examined. - MNHN 6707, holotype, 100.0 mm SL, Indonesia [Cuvier in Cuvier and Valenciennes (1829)].

Parascorpaena sp.

Material examined. - MNHN 2005-2606, 53.8 mm SL, New Caledonia.

Remarks. - This specimen most likely represents an undescribed species of *Parascorpaena* in having the first and second suborbital ridges fused and forming a single ridge, two suborbital spines, 15 pectoral-fin rays and a relatively deep occipital pit. Additional examples of the species from the Philippines are to be described by Motomura *et al.* (in prep.) in a forthcoming taxonomic revision of the genus.

***Phenacoscorpius adenensis* Norman, 1939**

Phenacoscorpius adenensis Norman, 1939: 94, fig. 29 (type locality: Gulf of Aden, northwestern Indian Ocean).

Material examined. - MNHN 1988-1522, 66.2 mm SL, Madagascar.

***Phenacoscorpius megalops* Fowler, 1938**

Phenacoscorpius megalops Fowler, 1938: 70, fig. 30 (type locality: 27 miles southeast of Bagatao Island Light, Philippines, 12°54'40"N, 123°20'30"E).

Material examined. - MNHN 1985-0392, 76.2 mm SL, Philippines; MNHN 1998-0070, 57.4 mm SL, Vanuatu; MNHN 1998-1069, 39.7 mm SL, Vanuatu; MNHN 2000-5651, 34.7 mm SL, New Caledonia; MNHN 2002-3098, 20, 37.0-54.8 mm SL, Fiji; MNHN 2002-3172, 66.5 mm SL, New Caledonia; MNHN 2002-3200, 51.3 mm SL, New Caledonia; MNHN 2005-1263, 4, 47.3-90.4 mm SL, Philippines; MNHN 2005-1707, 8, 28.4-50.2 mm SL, Philippines; MNHN 2005-3440, 75.0 mm SL, Solomon Islands; MNHN 2008-1313, 6, 44.0-72.8 mm SL, Vanuatu; MNHN 2010-0533 (ex. MNHN 2002-2969), 41.4 mm SL, Philippines; MNHN 2010-0876, 51.0 mm SL, Vanuatu; MNHN 2010-0943 (ex. MNHN 1998-0029), 72.2 mm SL, Vanuatu.

***Phenacoscorpius* sp. 1**

Material examined. - MNHN 2000-1471, 53.0 mm SL, New Caledonia; MNHN 2003-1524, 3, 50.7-87.3 mm SL, New Caledonia; MNHN 2003-1531, 2, 62.2-93.7 mm SL, New Caledonia; MNHN 2003-1543, 11, 30.2-71.2 mm SL, New Caledonia; MNHN 2005-2593, 3, 34.7-35.1 mm SL, New Caledonia; MNHN 2005-2659, 11, 56.0-97.0 mm SL, New Caledonia; MNHN 2005-2660, 7, 45.0-85.7 mm SL, New Caledonia; MNHN 2010-0941 (ex. MNHN

2005-2655), 94.7 mm SL, New Caledonia; MNHN 2010-0942 (ex. MNHN 2005-2655), 83.7 mm SL, New Caledonia.

Remarks. - This species is characterized by having palatine teeth, about 10 pored lateral-line scales, and a slender caudal peduncle, and lacking the second preopercular spine. It is most likely to be an undescribed species.

***Phenacoscorpius* sp. 2**

Material examined. - MNHN 1998-0034, 52.9 mm SL, New Caledonia; MNHN 1998-0081, 26.6 mm SL, Vanuatu; MNHN 2000-5678, 52.1 mm SL, Vanuatu; MNHN 2001-2855, 34.3 mm SL, Vanuatu; MNHN 2003-1512, 5, 31.5-56.3 mm SL, New Caledonia; MNHN 2004-0003, 8, 19.2-36.0 mm SL, New Caledonia; MNHN 2004-1626, 35.1 mm SL, New Caledonia; MNHN 2010-0827, 2, 59.3-65.0 mm SL, Vanuatu.

Remarks. - This species is similar to *Phenacoscorpius adenensis* in having palatine teeth, but has a more slender body and smaller head than the latter. Because both the holotype of *P. adenensis* (BMNH 1939.5.24.1545, 79.5 mm SL, Somalia, Gulf of Aden) and a non-type specimen examined here (MNHN 1988-1522, 66.2 mm SL, Madagascar) were in very poor condition, examination of additional material is necessary for a more detailed comparison.

***Pontinus macrocephalus* (Sauvage, 1882)**

Sebastes macrocephalus Sauvage, 1882: 169 (type locality: Hawaiian Islands).

Material examined. - MNHN A. 4165, holotype, 364.5 mm SL, Hawaiian Islands [Sauvage (1882); Eschmeyer and Randall (1975)]; MNHN 1975-1036, 108.8 mm SL, Hawaiian Islands.

***Pontinus nigerimum* Eschmeyer, 1983 (Fig. 4)**

Pontinus nigerimum Eschmeyer, 1983: 3, Fig. 1 (type locality: off Natal, South Africa).

Material examined. - MNHN 2004-0046, 189.6 mm SL, Madagascar; MNHN 2010-0046, 202.4 mm SL, Réunion; MNHN ICOS-00493, 247 mm SL, Réunion.

Remarks. - The above specimens, collected off Androka, Androy, Madagascar (25°00'00"S, 44°04'59"E) at a depth

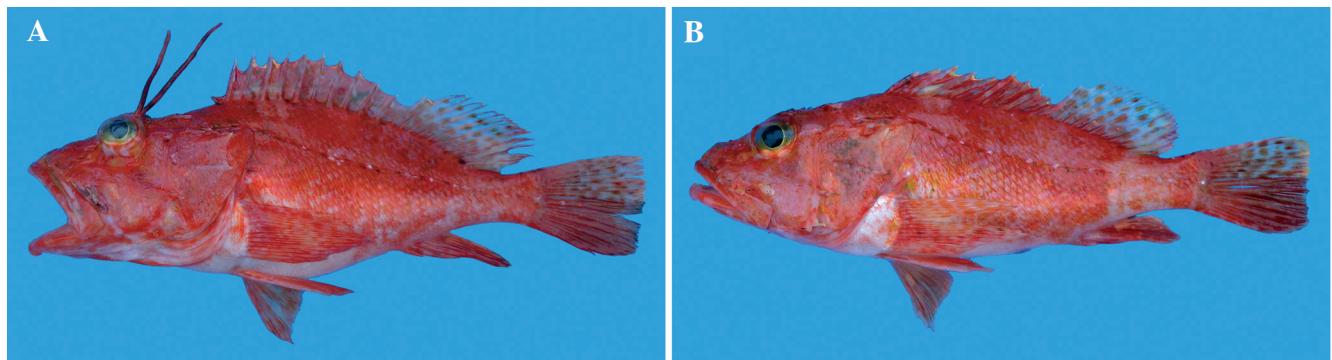


Figure 4. - *Pontinus nigerimum*. A: MNHN ICOS-00493, 247 mm SL, Réunion; B: MNHN 2010-0046, 202.4 mm SL, Réunion (photos by P. Béarez).

of 1200 m and from St. Gilles, Réunion ($21^{\circ}01'59''S$, $55^{\circ}12'00''E$), represent the first reliable records of *P. nigerium* outside the east coast of Africa.

Two specimens (MNHN 2004-0046 and MNHN ICOS-00493) had well developed supraocular tentacles, the length and coloration of which were consistent with the description given by Eschmeyer (1983). However, the third specimen (MNHN 2010-0046) lacked supraocular tentacles. With that exception, however, no differences between the three specimens were found, indicating that tentacle length and coloration are not reliably diagnostic for the species.

Pontinus rhodochrous (Günther, 1872)

Sebastes rhodochrous Günther, 1872: 659 (type locality: Manado, Sulawesi, Indonesia).

Material examined. - MNHN 1890-0094, holotype of *Sebastes hexanema*, 90.4 mm SL, Indonesia [Günther (1880)]; MNHN 1995-0736, 53.0 mm SL, Wallis and Futuna Islands; MNHN 1998-0029, 2, 98.2-166.0 mm SL, Vanuatu; MNHN 1998-0083, 160.5 mm SL, Vanuatu; MNHN 1998-0210, 2, 154.6-175.5 mm SL, Vanuatu; MNHN 1998-0222, 110.0 mm SL, Vanuatu; MNHN 2002-1324, 83.6 mm SL, New Caledonia; MNHN 2004-1625, 97.3 mm SL, New Caledonia; MNHN 2005-2629, 131.7 mm SL, New Caledonia; MNHN 2005-2651, 169.0 mm SL, New Caledonia; MNHN 2005-2653, 120.4 mm SL, New Caledonia; MNHN 2005-2655, 168.9 mm SL, New Caledonia; MNHN 2005-2657, 2, 130.6-146.0 mm SL, New Caledonia; MNHN 2010-0946 (ex. MNHN 1998-0069), 82.4 mm SL, Vanuatu; MNHN 2010-0950 (ex. MNHN 2005-1281), 109.7 mm SL, Philippines.

Remarks. - Although Eschmeyer (1983) regarded *Pontinus hexanema* (Günther, 1880) as a valid species, examination of the holotype of *Sebastes hexanema* (MNHN 1890-0094, 90.4 mm SL) and syntypes of *Sebastes rhodochrous* (BMNH 1871.7.20.52, 2, snout damaged, approximately 109-168 mm SL) during this study showed them to be identical. Accordingly, *S. hexanema* is herein regarded as a junior synonym of *S. rhodochrous*.

Pteroidichthys amboinensis Bleeker, 1856

Pteroidichthys amboinensis Bleeker, 1856b: 34 (type locality: Amboin, Moluccas, Indonesia; Manado, northern Sulawesi, Indonesia).

Material examined. - MNHN 2000-4558, 3, 20.4-27.5 mm SL, Marquesas Islands; MNHN 2005-2620, 3, 52.7-55.4 mm SL, New Caledonia; MNHN 2010-0530, 3, 23.9-27.3 mm SL, Marquesas Islands; MNHN 2010-0931 (ex. MNHN 2000-5683), 22.7 mm SL, Marquesas Islands; MNHN 2010-0947 (ex. MNHN 1995-0736), 44.3 mm SL, Wallis and Futuna Islands.

Pteroidichthys noronhai (Fowler, 1938)

Pteropelor noronhai Fowler, 1938: 78, fig. 34 (type locality: vicinity of Hong Kong, China Sea, $21^{\circ}33'00''N$, $116^{\circ}13'00''E$).

Material examined. - MNHN 1998-0215, 24.1 mm SL, Vanuatu; MNHN 1998-0760, 35.1 mm SL, Vanuatu; MNHN 2001-2851, 2, 38.7-41.8 mm SL, Wallis and Futuna Islands; MNHN 2010-0535 (ex. MNHN 2003-2444), 2, 35.8-35.9 mm SL, Philippines.

Rhinopias aphanes Eschmeyer, 1973

Rhinopias aphanes Eschmeyer in Eschmeyer et al., 1973: 300, fig. 8 (type locality: off Nouméa, New Caledonia).

Material examined. - MNHN 1980-0380, 11.1 mm SL, New Caledonia (Fourmanoir, 1976; Motomura and Johnson, 2006).

Rhinopias eschmeyeri Condé, 1977

Rhinopias eschmeyeri Condé, 1977: 19, figs 1-3 (type locality: Mahébourg, Mauritius).

Material examined. - MNHN 1965-0264, 123.1 mm SL, Vietnam [Motomura and Johnson (2006)]; MNHN 1966-0855, 126.2 mm SL, Réunion [Motomura and Johnson (2006)]; MNHN 1982-0067, 125.5 mm SL, Seychelles [Motomura and Johnson (2006)].

Rhinopias frondosa (Günther, 1892)

Scorpaena frondosa Günther, 1892: 482, pl. 39 (type locality: Mauritius).

Material examined. - MNHN 1967-0550, 79.4 mm SL, Réunion (Eschmeyer et al., 1973; Motomura and Johnson, 2006); MNHN 1992-0492, 2, 107.7-142.8 mm SL, Madagascar (Motomura and Johnson, 2006).

Scorpaena bulacephala Motomura, Last & Yearsley, 2005

Scorpaena bulacephala Motomura, Last & Yearsley, 2005a: 19, figs 1-5 (type locality: south of Norfolk Island, Norfolk Ridge, Tasman Sea, $28^{\circ}54'-55'S$, $167^{\circ}40'-41'E$).

Material examined. - MNHN 2002-0041, 2, 30.5-40.8 mm SL, Vanuatu.

Remarks. - The present specimens had 17 pectoral-fin rays (18 on left side of body in larger specimen), 39-40 scale rows in longitudinal series, the lateral surface of the maxilla without a longitudinal ridge, the lateral surface of the lacrimal without spines, the anterior lacrimal spine with a small spine on its posterior margin, and exposed cycloid scales covering the anteroventral surface of the body and pectoral-fin base. These characters agree with the diagnosis of *S. bulacephala*, previously known only from the Tasman Sea, according to Motomura et al. (2005a). The present specimens, collected off Vanuatu ($20^{\circ}19'S$, $169^{\circ}51'E$) at a depth of 128-150 m, therefore represent the first records of *S. bulacephala* from outside the Tasman Sea.

Scorpaena cardinalis Solander & Richardson, 1842

Scorpaena cardinalis Solander & Richardson in Richardson, 1842: 212 (type locality: Motuaro, Queen Charlotte's Sound, New Zealand).

Material examined. - MNHN A. 1227, 2, 182.3-201.0 mm SL, New South Wales; MNHN A. 1228, 2, 117.6-125.1 mm SL, New South Wales; MNHN A. 1229, 2, 148.5-183.8 mm SL, New South Wales; MNHN A. 2321, 153.0 mm SL, New South Wales.

Scorpaena colorata (Gilbert, 1905)

Sebastapistes coloratus Gilbert, 1905: 627, fig. 243 (type locality: south of Molokai Island, Hawaiian Islands).

Material examined. - MNHN 1975-1104, 15, 23.9-70.4 mm SL, Hawaiian Islands.

Scorpaena miostoma Günther, 1877

Scorpaena miostoma Günther, 1877: 435 (type locality: a market in Yokohama, Japan).

Material examined. - MNHN 1941-0167, 2, 41.0-45.2 mm SL, China.

Scorpaena onaria Jordan & Snyder, 1900

Scorpaena onaria Jordan & Snyder, 1900: 365, pl. 16 (type locality: Misaki, Japan).

Material examined. - MNHN 2000-1436, 182.4 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2000-1459, 155.4 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2003-1563, 114.6 mm SL, New Caledonia; MNHN 2003-1838, 174.6 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2003-1839, 2, 159.8-193.7 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2003-2357, 154.4 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2003-2363, 171.5 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2003-2423, 196.2 mm SL, New Caledonia (Motomura et al., 2005c); MNHN 2005-2650, 130.4 mm SL, New Caledonia; MNHN 2007-0114, 2, 160.5-198.9 mm SL, New Caledonia; MNHN 2010-468 (ex. 2005-2654), 77.7 mm SL, New Caledonia.

Scorpaena sumptuosa Castelnau, 1875

Scorpaena sumptuosa Castelnau, 1875: 17 (type locality: Fremantle, Western Australia, Australia).

Material examined. - MNHN A. 710, 228.6 mm SL, Western Australia (Motomura et al., 2006b); MNHN A. 4409, dried syntype, 241.2 mm SL, Western Australia (Motomura et al., 2006b); MNHN B. 2570, dried syntype, 229.1 mm SL, Western Australia (Motomura et al., 2006b).

Scorpaenodes albaiensis (Evermann & Seale, 1907)

Hypomacrus albaiensis Evermann & Seale, 1907: 102, fig. 20 (type locality: Bacon, Sorsogon Province, Philippines).

Material examined. - MNHN 1977-0702, 2, 35.5-48.8 mm SL, Djibouti; MNHN 1980-0414, 37.4 mm SL, Vanuatu; MNHN 1980-0572, 30.0 mm SL, New Caledonia; MNHN 1992-0296, 56.5 mm SL, Madagascar.

Scorpaenodes guamensis (Quoy & Gaimard, 1824)

Scorpaena guamensis Quoy & Gaimard, 1824: 326 (type locality: Guam, Mariana Islands).

Material examined. - MNHN 4526, 2, 42.1-44.1 mm SL, Indonesia (Bleeker's specimen); MNHN 6666, syntype of *Sebastes minutus*, 57.2 mm SL, Indonesia [Cuvier in Cuvier and Valenciennes (1829), as *Sebastes minutus*]; MNHN 6667, 2 syntypes of *Scorpaena guamensis* and *Sebastes minutus*, 29.5-44.0 mm SL, Mariana Islands [Quoy and Gaimard (1824), as *Scorpaena guamensis*; Cuvier in Cuvier and Valenciennes (1829), as *Sebastes minutus*]; MNHN 6668, 2 syntypes of *Sebastes minutus*, 53.8-60.8 mm SL, Society Islands [Cuvier in Cuvier and Valenciennes (1829), as *Sebastes minutus*]; MNHN 6669, 2 syntypes of *Sebastes minutus*, 44.1-51.3 mm SL, Society Islands [Cuvier in Cuvier and Valenciennes (1829), as *Sebastes minutus*]; MNHN 7000, syntype of *Sebastes minutus*, 79.9 mm SL, Indonesia [Cuvier in Cuvier and Valenciennes (1829), as *Sebastes minutus*]; MNHN 9888, 3, 49.1-68.2 mm SL, Fiji; MNHN 9889, 4, 37.7-51.2 mm SL, Fiji; MNHN 1980-0390, 50.0 mm SL, New Caledonia; MNHN 1987-0015, 2, 44.1-78.0 mm SL, Society Islands; MNHN 2005-2628, 4, 40.6-47.9 mm SL, New Caledonia; MNHN 2008-0388, 22.8 mm SL, Society Islands.

Remarks. - *Scorpaenodes guamensis* was originally described as *Scorpaena guamensis* by Quoy and Gaimard (1824) on the basis of two syntypes (MNHN 6667). Subsequently, *Sebastes minutus* was described by Cuvier in Cuvier and Valenciennes (1829) from 11 syntypical specimens, although that species has been reported only once since its original description, in the MNHN type catalog. Examination of the eight syntypes of *Sebastes minutus* deposited at MNHN (listed above) showed them to be identical with *Scorpaenodes guamensis*. Significantly, these syntypes included the two syntypes of *Scorpaena guamensis*. The 3 remaining syntypes of *Sebastes minutus* were also examined in this study, RMNH 657 (1 syntype, 51.5 mm SL) and SMF 1473 (1 of 2 syntypes, 58.8 mm SL) being identified as *Scorpaenodes guamensis*, and SMF 1473 (1 of 2 syntypes, 48.2 mm SL) as *Scorpaenodes varipinnis*. To avoid future nomenclatural confusion, one of the two syntypes registered in MNHN 6667 should be designated as the lectotype of *Sebastes minutus* when the genus is reviewed, at which time *Sebastes minutus* is likely to become an objective junior synonym of *Scorpaena guamensis*.

Scorpaenodes hirsutus (Smith, 1957)

Parascorpaenodes hirsutus Smith, 1957: 63, pl. 1 (fig. E), fig. 5 (type locality: Bazaruto Island, Mozambique, 21°30'S, 35°30'E).

Material examined. - MNHN 1980-0604, 2, 23.7-29.4 mm SL, New Caledonia; MNHN 1990-0828, 17.8 mm SL, Comoro Islands; MNHN 2005-2617, 4, 26.0-33.3 mm SL, New Caledonia; MNHN 2005-2627, 31.8 mm SL, New Caledonia; MNHN 2008-0286, 22.8 mm SL, Society Islands.

***Scorpaenodes kelloggi* (Jenkins, 1903)**

Sebastopsis kelloggi Jenkins, 1903: 492, fig. 37 (type locality: Honolulu, Oahu, Hawaiian Islands).

Material examined. - MNHN 1975-1106, 33.8 mm SL, Hawaiian Islands; MNHN 1975-1107, 10, 16.1-31.4 mm SL, Hawaiian Islands; MNHN 2008-0636, 22.8 mm SL, Society Islands.

***Scorpaenodes minor* (Smith, 1958)**

Hypomacrus minor Smith, 1958: 178 (type locality: Bazaruto Island, Mozambique).

Material examined. - MNHN 2008-0975, 30.6 mm SL, Society Islands.

***Scorpaenodes parvipinnis* (Garrett, 1864)**

Scorpaena parvipinnis Garrett, 1864: 105 (type locality: Hawaiian Islands).

Material examined. - MNHN 1976-0139, 37.4 mm SL, Marshall Islands; MNHN 1980-0391, 61.7 mm SL, New Caledonia; MNHN 1980-0894, 54.7 mm SL, New Caledonia; MNHN 1984-0283, 51.2 mm SL, Society Islands; MNHN 2008-1053, 30.2 mm SL, Society Islands.

***Scorpaenodes scaber* (Ramsay & Ogilby, 1886)**

Sebastes scaber Ramsay & Ogilby, 1886: 577 (type locality: Shark Reef, Port Jackson, New South Wales, Australia).

Material examined. - MNHN 6728, 6, 30.0-47.1 mm SL, Red Sea; MNHN 1952-0272, 38.7 mm SL, Red Sea; MNHN 1976-0339, 5, 51.5-66.9 mm SL, Marshall Islands; MNHN 1977-0742, 38.3 mm SL, Gulf of Tadjoura (Djibouti); MNHN 1980-0150, 3, 43.9-48.7 mm SL, New Caledonia; MNHN 1980-0809, 36.2 mm SL, New Caledonia; MNHN 1984-0282, 16, 12.0-68.4 mm SL, Society Islands; MNHN 2008-0633, 66.9 mm SL, Society Islands; MNHN 2008-0634, 49.5 mm SL, Society Islands; MNHN 2008-0635, 38.2 mm SL, Society Islands.

***Scorpaenodes steinitzi* Klausewitz & Frøiland, 1970**

Scorpaenodes steinitzi Klausewitz & Frøiland, 1970: 318, figs 1-2 (type locality: Eilat, Israel, Gulf of Aqaba, Red Sea).

Material examined. - MNHN 1977-1018, 58.4 mm SL, Red Sea; MNHN 1977-1019, 3, 46.8-55.0 mm SL, Red Sea.

***Scorpaenodes varipinnis* Smith, 1957**

Scorpaenodes varipinnis Smith, 1957: 65, fig. 5, pl. 3 (fig. D) (type locality: Tanzania).

Material examined. - MNHN A. 2507, 24.3 mm SL, New Caledonia; MNHN 4527, 5, 21.9-28.7 mm SL, Indonesia (Bleeker's specimens); MNHN 1904-0335, 25.0 mm SL, Djibouti; MNHN 1965-0452, 31.7 mm SL, Madagascar; MNHN 1981-1196, 41.9 mm SL, India; MNHN 1990-0829, 15.1 mm SL, Comoro Islands; MNHN 1990-0830, 47.0 mm SL, Comoro Islands; MNHN 2005-2590, 2, 43.7-44.7 mm SL, New Caledonia; MNHN 2005-

2610, 22.9 mm SL, New Caledonia; MNHN 2008-0637, 14.2 mm SL, Society Islands; MNHN 2010-0532 (ex. MNHN 2005-2628), 47.8 mm SL, New Caledonia.

***Scorpaenopsis barbata* (Rüppell, 1838)**

Scorpaena barbata Rüppell, 1838: 105, pl. 27 (fig. 1) (Massawa, Eritrea, Red Sea).

Material examined. - MNHN 6660, 120.2 mm SL, Red Sea; MNHN 1977-0890, 157.7 mm SL, Red Sea; MNHN 1977-0891, 106.5 mm SL, Red Sea; MNHN 1977-0892, 117.6 mm SL, Red Sea.

***Scorpaenopsis brevifrons* Eschmeyer & Randall, 1975**

Scorpaenopsis brevifrons Eschmeyer & Randall, 1975: 299, figs 14-15 (type locality: Kaneohe Bay, Oahu, Hawaiian Islands).

Material examined. - MNHN 1975-1105, 4, 64.6-88.3 mm SL, Hawaiian Islands.

***Scorpaenopsis cirrosa* (Thunberg, 1793)**

Perca cirrosa Thunberg, 1793: 199, pl. 7 [type locality: Miyake-jima Island, Izu Islands, Japan, based on neotype designated by Randall and Eschmeyer (2002)].

Material examined. - MNHN 2010-0466 (ex. MNHN 7312), 163.9 mm SL, China [Sauvage (1873), as *Scorpaenopsis oxycephala*].

***Scorpaenopsis cacopsis* Jenkins, 1901**

Scorpaenopsis cacopsis Jenkins, 1901: 401, figs 13-14 (type locality: Honolulu, Oahu, Hawaiian Islands).

Material examined. - MNHN A. 2702, 261.1 mm SL, Hawaiian Islands; MNHN A. 2703, 279.1 mm SL, Hawaiian Islands.

***Scorpaenopsis diabolus* (Cuvier, 1829)**

Scorpaena diabolus Cuvier, 1829: 166 (type locality: Indo-West Pacific).

Material examined. - MNHN A. 8152, dry, 244.3 mm SL, Papua New Guinea; MNHN 2943, 197.1 mm SL, Marquesas Islands; MNHN 6684, 114.9 mm SL, Papua New Guinea [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena diabolus*]; MNHN 6718, non-syntype, 155.5 mm SL, Papua New Guinea [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena diabolus*]; MNHN 6719, 169.5 mm SL, locality unknown [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena diabolus*]; MNHN 8999, 108.3 mm SL, Hawaiian Islands; MNHN 9748, 2, 102.3-131.3 mm SL, Fiji; MNHN 1897-0331, 126.5 mm SL, Djibouti; MNHN 1967-552, 2, 164.0-204.7 mm SL, Réunion; MNHN 1975-1108, 56.8 mm SL, Hawaiian Islands; MNHN 1980-0808, 121.7 mm SL, New Caledonia; MNHN 1984-0281, 2, 153.9-220.4 mm SL, Society Islands; MNHN 1980-0087, 166.8 mm SL, Tuamotu Archipelago; MNHN 1992-0673, 97.5 mm SL, Madagascar; MNHN 2008-0821, 178.9 mm SL, Society Islands.

***Scorpaenopsis eschmeyeri* Randall & Greenfield, 2004**

Scorpaenopsis eschmeyeri Randall & Greenfield, 2004: 385, figs 1-2 (type locality: Rabi Island, Fiji, 16°26'S, 179°56'W).

Material examined. - MNHN 2004-0171, paratype, 93.2 mm SL, Fiji (Randall and Greenfield, 2004); MNHN 2005-2600, 84.0 mm SL, New Caledonia.

***Scorpaenopsis gibbosa* (Bloch & Schneider, 1801)**

Scorpaena gibbosa Bloch and Schneider, 1801: 192, pl. 44 (type locality: given as America, but erroneous).

Material examined. - MNHN 774, syntype of *Scorpaena nesogallica*, 85.9 mm SL, Réunion [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena nesogallica*; Randall and Eschmeyer (2002)]; MNHN 4359, 78.4 mm SL, locality mistakenly given as Tahiti because this species is distributed only in the western Indian Ocean; MNHN 6398, 98.5 mm SL, Mauritius; MNHN 6671, syntype of *Scorpaena nesogallica*, 76.8 mm SL, Mauritius [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena nesogallica*; Randall and Eschmeyer (2002)]; MNHN 6680, 2, 80.4-106.7 mm SL, Mauritius [Sauvage (1873)]; MNHN 1992-0297, 53.6 mm SL, Madagascar; MNHN 1982-0053, 93.4 mm SL, Seychelles.

***Scorpaenopsis gilchristi* (Smith, 1957)**

Dendroscorpaena gilchristi Smith, 1957: 61, fig. 4 (type locality: off Tugela River, South Africa).

Material examined. - MNHN 2005-2621, 3, 34.1-35.3 mm SL, New Caledonia.

Remarks. - These specimens, collected from the Chesterfield Islands, New Caledonia, had 16 pectoral-fin rays on each side of the body; 4 or 5 scale rows above the lateral line; 6 scale rows between the sixth dorsal-fin spine base and lateral line, 5 scale rows between the last spine base and lateral line; 13 or 14 gill rakers; the mandibular pores at the symphysis opening medially into a common midventral pit; no suborbital pit; a very narrow space between the ventral margin of the orbit and the suborbital ridge; the lateral lacrimal spine and first suborbital spine below the main suborbital ridge; the second suborbital spine at the end of the ridge; the upper opercular spine double; and the interorbital ridges not elevated posteriorly and joined to the tympanic spines. These characters agree well with the diagnosis of *S. gilchristi*, which has been previously recorded only from South Africa. However, the present specimens differed from the latter in having a higher count of scale rows in the longitudinal series (38-41 vs 34-35 in the latter). Because *S. gilchristi* is known only from two specimens (Randall and Eschmeyer, 2002) and those from New Caledonia number only three (all in poor condition), additional specimens from both regions are required to assess the taxonomic status of the New Caledonian material.

***Scorpaenopsis macrochir* Ogilby, 1910**

Scorpaenopsis macrochir Ogilby, 1910: 29 (type locality: Bulwer, Queensland, Australia).

Material examined. - MNHN 4345, 86.9 mm SL, Marquesas Islands; MNHN 2005-2604, 66.1 mm SL, New Caledonia; MNHN 2008-0904, 112.5 mm SL, Society Islands; MNHN 2010-0465 (ex. MNHN 1984-0281), 130.9 mm SL, Society Islands.

***Scorpaenopsis neglecta* Heckel, 1837**

Scorpaenopsis neglecta Heckel, 1837: 159 (type locality: Sea of East Indies).

Material examined. - MNHN 3029, 103.7 mm SL, Vietnam [Sauvage (1873), as *Scorpaenopsis gibbosa*]; MNHN 5267, 123.0 mm SL, China; MNHN 1992-0006, 83.9 mm SL, Sri Lanka.

***Scorpaenopsis orientalis* Randall & Eschmeyer, 2002**

Scorpaenopsis orientalis Randall & Eschmeyer, 2002: 41, pl. 5 (figs B-C), pl. 11 (fig. C) (type locality: Oshima, Meitsu, Nango, Miyazaki, Japan, 31°31.9'N, 131°23.5'E).

Material examined. - MNHN 2001-0458, paratype, 191.2 mm SL, Japan (Randall and Eschmeyer, 2002).

***Scorpaenopsis oxycephala* (Bleeker, 1849)**

Scorpaena oxycephalus Bleeker, 1849: 7 (type locality: Jakarta, Java, Indonesia).

Material examined. - MNHN 1965-0069, 246.5 mm SL, Réunion.

***Scorpaenopsis papuensis* (Cuvier, 1829)**

Scorpaena papuensis Cuvier in Cuvier & Valenciennes, 1829: 321 (type locality: Papua New Guinea).

Material examined. - MNHN 6701, holotype of *Scorpaena papuensis*, 113.1 mm SL, Papua New Guinea [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena papuensis*; Randall and Eschmeyer (2002)]; MNHN 1980-0603, 71.6 mm SL, New Caledonia; MNHN 2008-1479, 98.1 mm SL, Vanuatu.

***Scorpaenopsis possi* Randall & Eschmeyer, 2002**

Scorpaenopsis possi Randall & Eschmeyer, 2002: 54, pl. 7 (figs B-D), pl. 12 (figs A-C) (type locality: southern side off McCoy, Pitcairn Island, 25°04'S, 130°06'E).

Material examined. - MNHN 1966-0034, 178.1 mm SL, Marquesas Islands; MNHN 2001-1052, paratype, 187.4 mm SL, Society Islands (Randall and Eschmeyer, 2002); MNHN 2008-0949, 118.5 mm SL, Society Islands; MNHN 2008-1055, 134.1 mm SL, Society Islands; MNHN 2010-0464 (ex. MNHN 1984-0281), 134.9 mm SL, Society Islands.

***Scorpaenopsis pusilla* Randall & Eschmeyer, 2002**

Scorpaenopsis pusilla Randall & Eschmeyer, 2002: 60, pl. 8 (fig. A) (type locality: northwest side of Sentinelle de l'Est, Nuku Hiva, Marquesas Islands).

Material examined. - MNHN 2000-4500, 16, 24.6-41.4 mm SL, Marquesas Islands; MNHN 2000-4570, 3, 16.2-20.1 mm SL, Marquesas Islands; MNHN 2000-5194, 17, 16.8-30.5 mm SL, Marquesas Islands; MNHN 2000-5199, 19.1 mm SL, Marquesas Islands; MNHN 2000-5495, 4, 15.9-31.0 mm SL, Marquesas Islands; MNHN 2000-5683, 2, 21.5-21.6 mm SL, Marquesas Islands; MNHN 2003-0958, 18.6 mm SL, Marquesas Islands; MNHN 2003-1257, 2, 18.0-27.1 mm SL, Marquesas Islands; MNHN 2003-1273, 29.0 mm SL, Marquesas Islands; MNHN 2003-1277, 5, 14.1-19.0 mm SL, Marquesas Islands; MNHN 2010-0939 (ex. MNHN 2000-4549), 3, 20.2-27.0 mm SL, Marquesas Islands.

Remarks. - *Scorpaenopsis pusilla* has formerly been known only from two type specimens from the Marquesas Islands. Twenty of the 56 additional specimens (14.1-41.4 mm SL) from the Marquesas Islands, found in the MNHN fish collection, showed variation in counts of the pectoral-fin rays and longitudinal series scale rows (the most important characters for scorpionfish taxonomy), given as 17 and 43, respectively, by Randall and Eschmeyer (2002). These characters should be stated as: usually 17 pectoral-fin rays on each side of the body [rarely 16 rays on both sides (2 specimens), asymmetrically 16 and 17 rays (2 specimens), or 17 and 18 rays (1 specimen)] and 43-46 scale rows in longitudinal series (mode 45). In addition, gill-rakers in the specimens numbered 3-5 (upper limb), 6-10 (lower limb), and 10-13 (mode 12) in total, although Randall and Eschmeyer (2002) recorded counts of 4, 8, and 12 respectively.

***Scorpaenopsis ramaraoi* Randall & Eschmeyer, 2002**

Scorpaenopsis ramaraoi Randall & Eschmeyer, 2002: 64, pl. 8 (figs B-D), pl. 9 (fig. A), pl. 12 (fig. D) (type locality: off Hikkaduwa, Sri Lanka).

Material examined. - MNHN 823, 133.2 mm SL, Philippines [Sauvage (1873), as *Scorpaenopsis oxycephala*]; MNHN 6662, 148.2 mm SL, India [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaenopsis cirrhosa*]; MNHN 7312, 124.9 mm SL, China [Sauvage (1873), as *Scorpaenopsis oxycephala*]; MNHN 1889-0507, 128.8 mm SL, Papua New Guinea; MNHN 1889-0508, 124.7 mm SL, Papua New Guinea; MNHN 1889-0509, 116.8 mm SL, Papua New Guinea; MNHN 1889-0510, 78.3 mm SL, Papua New Guinea; MNHN 2001-1051, paratype, 139.4 mm SL, Vietnam [Randall and Eschmeyer (2002)].

***Scorpaenopsis venosa* (Cuvier, 1829)**

Scorpaena venosa Cuvier, 1829: 166 (type locality: Pondichery, India).

Material examined. - MNHN A. 886, 168.9 mm SL, Seychelles; MNHN 6676, holotype of *Scorpaena novaeguineae*, 114.3 mm SL, New Guinea [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena novaeguineae*; Randall and Eschmeyer (2002)]; MNHN 6703, holotype of *Scorpaena venosa*, 136.7 mm SL, India [Cuvier (1829), as *Scorpaena venosa*; Randall and Eschmeyer (2002)]; MNHN 1892-0227, 146.3 mm SL, Seychelles; MNHN 1966-0572,

107.1 mm SL, Red Sea; MNHN 2004-0031, 167.2 mm SL, Madagascar; MNHN 2005-2656, 111.5 mm SL, New Caledonia; MNHN 2008-1480, 88.4 mm SL, Vanuatu; MNHN 2008-1489, 103.0 mm SL, Vanuatu.

Remarks. - Randall and Eschmeyer (2002) recorded specimens of *S. venosa* from South Africa, India and Sri Lanka in the Indian Ocean, and from Japan to Australia in the western Pacific Ocean. Subsequently, Motomura (2004a) reported a single specimen of *S. venosa* from the Saya de Malha Bank as the first record of the species from the central Indian Ocean. The above MNHN specimens were herein identified as *S. venosa* in having 17 pectoral-fin rays, 49-53 scale rows in longitudinal series, and a deep occipital pit with a straight anterior edge, and represent the first records of *S. venosa* from the Red Sea, the Seychelles, Madagascar and New Caledonia (the last-mentioned also representing the easternmost record for the species).

***Scorpaenopsis vittapinna* Randall & Eschmeyer, 2002**

Scorpaenopsis vittapinna Randall & Eschmeyer, 2002: 71, pl. 9 (fig. D), pl. 12 (figs G-H) (type locality: off Sodwana Bay, KwaZulu-Natal, South Africa).

Material examined. - MNHN 1995-0734, 27.3 mm SL, Wallis and Futuna Islands; MNHN 2001-1050, paratype, 55.4 mm SL, Comoro Islands (Randall and Eschmeyer, 2002).

***Sebastapistes ballieui* (Sauvage, 1875)**

Scorpaena ballieui Sauvage in Vaillant & Sauvage, 1875: 278 (type locality: Hawaiian Islands).

Material examined. - MNHN 6883, 2 syntypes, 31.9-85.7 mm SL, Hawaiian Islands [Sauvage in Vaillant and Sauvage (1875)]; MNHN 8993, syntype, 79.2 mm SL, Hawaiian Islands [Sauvage in Vaillant and Sauvage (1875)]; MNHN 9557, 2 syntypes, 63.1-74.2 mm SL, Hawaiian Islands [Sauvage in Vaillant and Sauvage (1875)]; MNHN 1975-1102, 3, 58.9-70.2 mm SL, Hawaiian Islands; MNHN 1975-1103, 3, 54.1-81.0 mm SL, Hawaiian Islands.

***Sebastapistes cyanostigma* (Bleeker, 1856)**

Scorpaena cyanostigma Bleeker, 1856a: 400 (type locality: Moluccas Islands, Indonesia).

Material examined. - MNHN 5657, 7, 35.0-55.7 mm SL, Tanzania; MNHN 1990-832, 4, 36.4-45.1 mm SL, Comoro Islands.

***Sebastapistes fowleri* (Pietschmann, 1934)**

Scorpaena fowleri Pietschmann, 1934: 100 (type locality: Makaua, Oahu, Hawaiian Islands).

Material examined. - MNHN A. 4132, 2, 26.1-27.3 mm SL, Philippines; MNHN 1990-0831, 15.0 mm SL, Comoro Islands; MNHN 2008-0203, 21.1 mm SL, Society Islands; MNHN 2008-0204, 19.7 mm SL, Society Islands; MNHN 2008-0205, 18.3 mm SL, Society Islands; MNHN 2008-0228, 16.0 mm SL, Society Islands; MNHN 2008-0843, 15.9 mm SL, Society Islands; MNHN 2008-0845, 15.6 mm SL, Society Islands; MNHN 2008-0980,

19.0 mm SL, Society Islands; MNHN 2008-0984, 19.8 mm SL, Society Islands; MNHN 2010-0933 (ex. MNHN 1980-0105), 2, 21.6-23.3 mm SL, Gambier Islands.

***Sebastapistes galactacma* Jenkins, 1903**

Sebastapistes galactacma Jenkins, 1903: 496, fig. 40 (type locality: Honolulu, Oahu, Hawaiian Islands).

Material examined. - MNHN 1980-0105, 27.7 mm SL, Gambier Islands.

***Sebastapistes mauritiana* (Cuvier, 1829)**

Scorpaena mauritiana Cuvier in Cuvier & Valenciennes, 1829: 322 (type locality: Mauritius).

Material examined. - MNHN A. 2297, 56.6 mm SL, locality known only as Pacific Ocean; MNHN 4069, holotype of *Scorpaena megastoma*, 65.9 mm SL, Réunion [Sauvage (1878), as *Scorpaena megastoma*]; MNHN 4485, 56.3 mm SL, Réunion; MNHN 5711, holotype, 61.8 mm SL, Mauritius; MNHN 6712, 43.0 mm SL, Marquesas Islands; MNHN 1965-0453, 6, 35.4-60.2 mm SL, Madagascar; MNHN 1976-0338, 20.2 mm SL, Marshall Islands; MNHN 1980-0106, 25.8 mm SL, Gambier Islands; MNHN 1992-0294, 47.4 mm SL, Madagascar; MNHN 2010-0527 (ex. 1965-450), 31.0 mm SL, Madagascar.

***Sebastapistes strongia* (Cuvier, 1829)**

Scorpaena strongia Cuvier in Cuvier & Valenciennes, 1829: 323 (type locality: Kosrae, Caroline Islands, Federated States of Micronesia, western Pacific).

Material examined. - MNHN 597, 2, 31.3-36.8 mm SL, Indonesia; MNHN 1940, 3 syntypes, 36.5-47.7 mm SL, Caroline Islands; MNHN 6657, holotype of *Scorpaena laniaria*, 37.4 mm SL, Mariana Islands [Cuvier in Cuvier and Valenciennes (1829), as *Scorpaena laniaria*]; MNHN 6732, 6, 33.6-46.5 mm SL, Red Sea; MNHN 1952-0271, 6, 23.1-44.0 mm SL, Red Sea; MNHN 1964-0247, 3, 41.6-54.6 mm SL, Tanzania; MNHN 1980-0393, 31.1 mm SL, New Caledonia; MNHN 1999-0068, 5, 16.9-33.2 mm SL, Madagascar.

Remarks. - *Scorpaena laniaria* was originally described by Cuvier in Cuvier and Valenciennes (1829) from Guam, the Mariana Islands, on the basis of a single specimen (MNHN 6657). The nominal species has at no time been reported since its original description, the taxonomic status of the species therefore remaining unclear. Examination of the holotype of *Scorpaena laniaria* showed it to have the following characters: D XII, 9; A III, 5; 43 scale rows in longitudinal series; 22 pored lateral-line scales; 5 scale rows above lateral line, 15 below lateral line; 7 scale rows between sixth dorsal-fin spine base and lateral line; 6 scale rows between last dorsal-fin spine base and lateral line; 5 + 10 = 15 gill rakers; ctenoid body scales; occipital pit absent; no lateral lacrimal spines; 2 spines on ventral margin of lacrimal bone; posterior lacrimal spine simple; 3 suborbital spines (2 on left side of head); and no coronal spines. These characters agree with the diagnosis of *S. taeniophrys* given by Motomura (2009). Although *S. taeniophrys* has previously been known only from two specimens (holotype and paratype) from the Philippines (Motomura, 2009), the Indian Ocean record of the present specimen indicates that the species is most likely to be widely distributed in the Indo-West Pacific.

given in Motomura (2009) and characters of the syntypes of *Scorpaena strongia* examined in this study. *Scorpaena laniaria* and *Scorpaena strongia* were described on the same date in the same publication (Cuvier in Cuvier and Valenciennes, 1829), the former appearing on page 324 and the latter on page 323. Although “position precedence” is now restricted to subsequent fixation of type species (article 69A.10), following ICZN (1999), *Scorpaena strongia* is herein selected as the valid name (being a senior synonym of *Scorpaena laniaria*) due to the wide use of the name (as *Sebastapistes strongia*) in publications (e.g., Poss 1999; Randall and Poss, 2002; Motomura, 2009).

***Sebastapistes taeniophrys* (Fowler, 1943)**

Scorpaena taeniophrys Fowler, 1943: 66, fig. 12 (type locality: Cammahana Bay, Luzon Island, Philippines).

Material examined. - MNHN 1965-0454, 35.3 mm SL, Madagascar.

Remarks. - The present specimen, collected from off Tulear, Toliara, Madagascar ($23^{\circ}19'59''S$, $43^{\circ}30'00''E$), had the following characters: 14 pectoral-fin rays on both sides of body; 31 scale rows in longitudinal series; 15 pored lateral-line scales; 4 scale rows above lateral line, 9 below lateral line; 4 scale rows between sixth dorsal-fin spine base and lateral line; 5 scale rows between last dorsal-fin spine base and lateral line; 2 scale rows between anus and anal-fin origin; $4 + 8 = 12$ gill rakers; ctenoid body scales; no lateral lacrimal spines; 2 spines on ventral margin of lacrimal bone; posterior lacrimal spine simple; 3 suborbital spines (2 on left side of head); and no coronal spines. These characters agree with the diagnosis of *S. taeniophrys* given by Motomura (2009). Although *S. taeniophrys* has previously been known only from two specimens (holotype and paratype) from the Philippines (Motomura, 2009), the Indian Ocean record of the present specimen indicates that the species is most likely to be widely distributed in the Indo-West Pacific.

***Sebastapistes tinkhami* (Fowler, 1946)**

Scorpaena tinkhami Fowler, 1946: 208, Fig. 72 (type locality: Aguni-shima Island, Ryukyu Islands, Japan).

Material examined. - MNHN 2008-1097, 66.4 mm SL, Society Islands.

***Taenianotus triacanthus* Lacepède, 1802**

Taenianotus triacanthus Lacepède, 1802: 303, 306 (type locality: unknown).

Material examined. - MNHN 4051, holotype, 59.0 mm SL, locality unknown (Lacepède, 1802); Cuvier in Cuvier and Valenciennes, 1829); MNHN 1975-1119, 35.1 mm SL, Hawaiian Islands; MNHN 1975-1120, 79.9 mm SL, Hawaiian Islands; MNHN 1984-0284, 58.5 mm SL, Society Islands; MNHN 1992-0572, 4, 51.6-62.4 mm SL, Madagascar; MNHN 2005-2581, 63.5 mm SL, Réun-

ion; MNHN 2006-1741, 2, 66.0-66.8 mm SL, locality unknown (aquarium specimens).

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